**Amendments to the Claims**:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A two-dimensional weak radiation detector, comprising:

a photoelectric conversion part which emits electrons by incidence of photons;

an amplification module which is placed to face the photoelectric conversion part, and is provided with a number of electron amplification parts that amplify the electrons emitted by the photoelectric conversion part;

a detection module which is provided to correspond to each of said electron amplification parts constituting the amplification module, and is provided with a number of electron detection parts on which electrons from the electron amplification parts are incident;

an operation control part which operates each of said electron detection parts constituting the detection module based on an orthogonal modulation pattern; ~~and~~

a data read part which combines signals detected by a number of electron detection parts operated by said operation control part based on an orthogonal modulation pattern in time sequence and outputs the combined signals; and

a light incidence position calculation part which obtains positions of said photons incident on said photoelectric conversion part, based on a control signal of the operation control part and an output signal of each of said electron detection parts.

2. (Currently Amended) A two-dimensional weak radiation detector, comprising:

a photoelectric conversion part which emits electrons by incidence of photons;

an amplification module which is placed to face the photoelectric conversion part, and is provided with a number of electron amplification parts that amplify the electrons emitted by the photoelectric conversion part;

a detection module which is provided to correspond to each of said electron amplification parts constituting the amplification module, and is provided with a number of electron detection parts on which electrons from the electron amplification parts are incident;

an operation control part which operates each of said electron detection parts constituting the detection module based on an orthogonal modulation pattern;

a data read part which combines signals detected by a number of electron detection parts operated by said operation control part based on an orthogonal modulation pattern in time sequence and outputs the combined signals;

a light incidence position calculation part which obtains positions of said photons incident on said photoelectric conversion part, based on a control signal of the operation control part and an output signal of each of said electron detection parts; and

a wavelength calculation part which obtains energy of said photons based on a magnitude of the output signal of each of said electron detection parts, and converts the magnitude into a color signal.

3. (Previously Presented) The two-dimensional weak radiation detector according to claim 2,

wherein said wavelength calculation part obtains the magnitude of the output signal based on output pulse repetition frequency of the output signal of said electron detection part and converts the output pulse repetition frequency into said color signal.

4. (Previously Presented) The two-dimensional weak radiation detector according to claim 1,

wherein an emission part, which emits the photons by incidence of microwaves or corpuscular rays, is provided at a front of said photoelectric conversion part.